

Chemical Analysis Report

NW-DIST-2023-12-01-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **11-Mile Creek Recovery Run**
Request ID: **RQ-2023-11-27-15**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 21-DEC-2023 13:15

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: TEA LAKE (CENTER)

Collection Date/Time: 11/29/2023 11:55

Field ID: G5NW0035

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2453980	DEP SOP: NU-094-1	Color (true)	39	Q	PCU	P438414	
	EPA 180.1 Rev. 2.0	Turbidity	3.3	A	NTU	P438422	
	EPA 300.0 Rev. 2.1	Chloride	7.7E+03		mg Cl/L	P438738	
		Sulfate	1.1E+03		mg SO4/L	P438741	
	SM 2320 B-2011	Total Alkalinity	64		mg CaCO3/L	P438549	
	SM 2540 C-2015	TDS	1.42E+04		mg/L	P438848	
	SM 2540 D-2015	TSS	4	I	mg/L	P438776	
	SM 4500-F- C-2011	Fluoride	0.50	I	mg F/L	P438552	
2453982	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P438571	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P438466	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P438598	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P438481	
	SM 5310 B-2011	Organic Carbon	6.7		mg C/L	P438533	

Ref. Method and Comment:

DEP SOP: NU-094-1: The sample expired upon receipt.

Sample Location: BAYOU CHICO AT NAVY BVLD BRIDGE

Collection Date/Time: 11/29/2023 13:10

Field ID: G4NW0021

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454003	EPA 8270E	Aldrin	0.65	U	ng/L	P438751	
		Alpha-BHC	0.10	U	ng/L	P438751	
		Alpha-Chlordane	0.66	I	ng/L	P438751	
		PCB-1016	2.1	U	ng/L	P438751	
		Beta-BHC	0.10	U	ng/L	P438751	
		PCB-1221	2.1	U	ng/L	P438751	
		Beta-Cyfluthrin	1.2	U	ng/L	P438751	
		PCB-1232	2.1	U	ng/L	P438751	
		Bifenthrin	0.50	U	ng/L	P438751	
		PCB-1242	2.1	U	ng/L	P438751	
		PCB-1248	2.1	U	ng/L	P438751	
		Chlorothalonil	3.6	U	ng/L	P438751	
		PCB-1254	2.1	U	ng/L	P438751	
		Cis-Nonachlor	0.20	U	ng/L	P438751	
		PCB-1260	2.1	U	ng/L	P438751	
		Cypermethrin	1.5	U	ng/L	P438751	MS
		Dacthal	0.15	U	ng/L	P438751	
		DDD-p,p'	0.25	U	ng/L	P438751	
		DDE-p,p'	0.20	U	ng/L	P438751	
		DDT-p,p'	1.6	I	ng/L	P438751	
		Delta-BHC	0.40	U	ng/L	P438751	
		Deltamethrin	1.2	U	ng/L	P438751	
		Dichlobenil	0.25	U	ng/L	P438751	
		Dicofol	1.2	U	ng/L	P438751	
		Dieldrin	13		ng/L	P438751	
		Endosulfan I	0.40	U	ng/L	P438751	
		Endosulfan II	0.90	U	ng/L	P438751	
		Endosulfan Sulfate	0.30	U	ng/L	P438751	
		Endrin	0.90	U	ng/L	P438751	
		Endrin Aldehyde	0.75	U	ng/L	P438751	
		Endrin Ketone	0.40	U	ng/L	P438751	
		Esfenvalerate	0.75	U	ng/L	P438751	
		Ethalfuralin	0.15	U	ng/L	P438751	
		Fenpropathrin	0.25	U	ng/L	P438751	
		Gamma-BHC	0.12	U	ng/L	P438751	
		Gamma-Chlordane	0.39	I	ng/L	P438751	
		Heptachlor	0.20	U	ng/L	P438751	
		Heptachlor Epoxide	6.8		ng/L	P438751	
		Hexachlorobenzene**	1.0	U	ng/L	P438751	
		Kepone	14	U	ng/L	P438751	
		Lambda-Cyhalothrin	0.75	U	ng/L	P438751	
		Methoprene	0.75	U	ng/L	P438751	
		Methoxychlor	0.30	U	ng/L	P438751	
		MGK-264	0.20	U	ng/L	P438751	

Field ID: G4NW0021

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454003	EPA 8270E	Mirex	0.35	U	ng/L	P438751	
		Oxychlordane	0.30	U	ng/L	P438751	
		Permethrin	1.6	U	ng/L	P438751	
		Phenothrin	0.90	U	ng/L	P438751	
		Piperonyl Butoxide	0.15	U	ng/L	P438751	
		Prallethrin	2.0	U	ng/L	P438751	
		Tau-Fluvalinate	0.25	U	ng/L	P438751	
		Tetramethrin	0.75	U	ng/L	P438751	
		Trans-Nonachlor	0.20	U	ng/L	P438751	MS
		Triclosan Methyl	0.15	U	ng/L	P438751	
		Trifluralin	0.20	U	ng/L	P438751	RPD
		Chlordane	5.5	I	ng/L	P438751	
		Toxaphene	15	U	ng/L	P438751	
	EPA 8276						

Sample Location: ELEVENMILE CREEK 500 YARDS FROM MOUTH

Collection Date/Time: 11/29/2023 11:25

Field ID: G5NW0007

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2453981	DEP SOP: NU-094-1	Color (true)	34	Q	PCU	P438414	
	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P438422	
	EPA 300.0 Rev. 2.1	Chloride	820		mg Cl/L	P438810	
		Sulfate	250		mg SO4/L	P438814	
	SM 2320 B-2011	Total Alkalinity	35		mg CaCO3/L	P438549	
	SM 2540 C-2015	TDS	1.66E+03	Q	mg/L	P439144	
	SM 2540 D-2015	TSS	3	U	mg/L	P438776	
	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P438765	
2453983	EPA 350.1 Rev. 2.0	Ammonia-N	0.088		mg N/L	P438571	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P438466	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P438892	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P438558	
	SM 5310 B-2011	Organic Carbon	5.1		mg C/L	P438690	

Ref. Method and Comment:

DEP SOP: NU-094-1: The sample expired upon receipt.

SM 2540 C-2015: The sample needed to be reanalyzed because it was processed according to incorrect field conductivity. The reported result is consistent with the conductivity measured in the laboratory, 3450 umhos/cm.

Sample Location: BAYOU CHICO DRAIN WEST ARM

Collection Date/Time: 11/29/2023 13:25

Field ID: G4NW0022

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454004	EPA 8270E	Aldrin	0.67	U	ng/L	P438751	
		Alpha-BHC	0.10	U	ng/L	P438751	
		Alpha-Chlordane	1.1		ng/L	P438751	
		PCB-1016	2.1	U	ng/L	P438751	
		Beta-BHC	0.10	U	ng/L	P438751	
		PCB-1221	2.1	U	ng/L	P438751	
		Beta-Cyfluthrin	1.3	U	ng/L	P438751	
		PCB-1232	2.1	U	ng/L	P438751	
		Bifenthrin	0.51	U	ng/L	P438751	
		PCB-1242	2.1	U	ng/L	P438751	
		PCB-1248	2.1	U	ng/L	P438751	
		Chlorothalonil	3.7	U	ng/L	P438751	
		PCB-1254	2.1	U	ng/L	P438751	
		Cis-Nonachlor	0.21	U	ng/L	P438751	
		PCB-1260	2.1	U	ng/L	P438751	
		Cypermethrin	1.5	U	ng/L	P438751	MS
		Dacthal	0.15	U	ng/L	P438751	
		DDD-p,p'	0.26	U	ng/L	P438751	
		DDE-p,p'	0.21	U	ng/L	P438751	
		DDT-p,p'	0.82	U	ng/L	P438751	
		Delta-BHC	0.41	U	ng/L	P438751	
		Deltamethrin	1.3	U	ng/L	P438751	
		Dichlobenil	0.26	U	ng/L	P438751	
		Dicofol	1.3	U	ng/L	P438751	
		Dieldrin	18		ng/L	P438751	
		Endosulfan I	0.41	U	ng/L	P438751	
		Endosulfan II	0.92	U	ng/L	P438751	
		Endosulfan Sulfate	0.31	U	ng/L	P438751	
		Endrin	0.92	U	ng/L	P438751	
		Endrin Aldehyde	0.77	U	ng/L	P438751	
		Endrin Ketone	0.41	U	ng/L	P438751	
		Esfenvalerate	0.77	U	ng/L	P438751	
		Ethalfuralin	0.15	U	ng/L	P438751	
		Fenpropathrin	0.26	U	ng/L	P438751	
		Gamma-BHC	0.13	U	ng/L	P438751	
		Gamma-Chlordane	0.37	I	ng/L	P438751	
		Heptachlor	0.21	U	ng/L	P438751	
		Heptachlor Epoxide	8.4		ng/L	P438751	
		Hexachlorobenzene**	1.0	U	ng/L	P438751	
		Kepone	14	U	ng/L	P438751	
		Lambda-Cyhalothrin	0.77	U	ng/L	P438751	
		Methoprene	0.77	U	ng/L	P438751	
		Methoxychlor	0.31	U	ng/L	P438751	
		MGK-264	0.21	U	ng/L	P438751	

Field ID: G4NW0022

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454004	EPA 8270E	Mirex	0.36	U	ng/L	P438751	
		Oxychlordane	0.31	U	ng/L	P438751	
		Permethrin	1.6	U	ng/L	P438751	
		Phenothrin	0.92	U	ng/L	P438751	
		Piperonyl Butoxide	0.26	I	ng/L	P438751	
		Prallethrin	2.1	U	ng/L	P438751	
		Tau-Fluvalinate	0.26	U	ng/L	P438751	
		Tetramethrin	0.77	U	ng/L	P438751	
		Trans-Nonachlor	0.21	U	ng/L	P438751	MS
		Triclosan Methyl	0.15	U	ng/L	P438751	
		Trifluralin	0.21	U	ng/L	P438751	RPD
	EPA 8276	Chlordane	6.8		ng/L	P438751	
		Toxaphene	15	U	ng/L	P438751	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P438414

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438422

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438738

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438741

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438810

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438814

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438571

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438466

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438598

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438892

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438481

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438558

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 8270E
Batch ID: P438751

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.80	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.90	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	14	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P438751

Component	Result	Code	Units
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P438751

Component	Result	Code	Units
Chlordane	2.0	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: SM 2320 B-2011

Batch ID: P438549

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2015

Batch ID: P438848

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015

Batch ID: P439144

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P438776

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P438552

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P438765

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P438533

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-2011
Batch ID: P438690

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P438414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.2		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438422

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438738

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438741

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438814

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438571

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438466

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438598

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P438892

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438558

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	104		P	90 - 110

Reference Method: EPA 8270E

Batch ID: P438751

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	56.2		P	30 - 96.0
Alpha-BHC	88.3		P	70 - 109
Alpha-Chlordane	76.3		P	45 - 107
Beta-BHC	109		P	64 - 138
Beta-Cyfluthrin	51.8		P	17 - 141
Bifenthrin	39.4		P	10 - 113
Chlorothalonil	76.3		P	26 - 180
Cis-Nonachlor	61.4		P	37 - 102
Cypermethrin	68.8		P	20 - 133
Dacthal	90.3		P	69 - 114
DDD-p,p'	72.6		P	42 - 105
DDE-p,p'	77.1		P	42 - 106
DDT-p,p'	73.3		P	42 - 107
Delta-BHC	108		P	67 - 144
Deltamethrin	71.2		P	15 - 149
Dichlobenil	81.5		P	46 - 117
Dicofol	71.7		P	34 - 114
Dieldrin	86.1		P	50 - 108
Endosulfan I	90.9		P	55 - 104
Endosulfan II	91.8		P	51 - 111
Endosulfan Sulfate	81.1		P	56 - 121
Endrin	74.7		P	10 - 106
Endrin Aldehyde	91.8		P	34 - 114
Endrin Ketone	86.8		P	63 - 177
Esfenvalerate	62.2		P	29 - 143
Ethalfuralin	69.4		P	46 - 96.0
Fenpropathrin	61.9		P	28 - 115
Gamma-BHC	90.3		P	65 - 121
Gamma-Chlordane	75.7		P	39 - 103
Heptachlor	86.1		P	39 - 94.0
Heptachlor Epoxide	91.0		P	54 - 104
Hexachlorobenzene	59.0		P	36 - 100
Kepone	142		P	10 - 225
Lambda-Cyhalothrin	45.1		P	10 - 135

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P438751

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Methoprene	46.0		P	10 - 109
Methoxychlor	78.9		P	52 - 112
MGK-264	82.4		P	44 - 117
Mirex	50.6		P	20 - 90.0
Oxychlordane	81.6		P	44 - 102
PCB-1016	77.6		P	45 - 107
PCB-1260	98.8		P	40 - 118
Permethrin	52.9		P	18 - 135
Phenothrin	42.2		P	10 - 102
Piperonyl Butoxide	91.2		P	28 - 156
Prallethrin	70.9		P	28 - 113
Tau-Fluvalinate	51.5		P	10 - 123
Tetramethrin	87.2		P	18 - 158
Trans-Nonachlor	85.5		P	39 - 104
Triclosan Methyl	85.3		P	54 - 108
Trifluralin	68.8		P	46 - 97.0

Reference Method: EPA 8276
Batch ID: P438751

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	82.4		P	52 - 117
Toxaphene	94.3		P	44 - 125

Reference Method: SM 2320 B-2011
Batch ID: P438549

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.7		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P438848

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.4		P	85 - 115

Reference Method: SM 2540 C-2015
Batch ID: P439144

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	103		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P438776

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	97.6		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P438552

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P438552

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P438765

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P438533

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.1		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P438690

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438738

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453793	Chloride	102		P	90 - 110
2453940	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453793	Sulfate	99.8		P	90 - 110
2453940	Sulfate	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454116	Chloride	101		P	90 - 110
2454156	Chloride	98.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454116	Sulfate	99.4		P	90 - 110
2454156	Sulfate	95.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438571

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453982	Ammonia-N	94.4	96.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438466

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453744	Kjeldahl Nitrogen	102	94.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438598

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453742	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438892

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2455704	NO2NO3-N	96.5	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453742	Total-P	96.5	95.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454066	Total-P	96.7	98.5	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P438751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454003	PCB-1016	67.0	82.2	P/P	45 - 107
2454003	PCB-1260	104	107	P/P	40 - 112
2454159	Aldrin	61.6	48.5	P/P	24 - 81.0
2454159	Alpha-BHC	93.0	89.7	P/P	65 - 110
2454159	Alpha-Chlordane	72.4	81.9	P/P	43 - 119
2454159	Beta-BHC	96.3	106	P/P	54 - 165
2454159	Beta-Cyfluthrin	103	94.1	P/P	27 - 165
2454159	Bifenthrin	80.7	66.0	P/P	17 - 117
2454159	Chlorothalonil	138	133	P/P	10 - 255
2454159	Cis-Nonachlor	60.5	43.7	P/P	34 - 98.0
2454159	Cypermethrin	133	143	P/F	25 - 143
2454159	Dacthal	82.7	68.9	P/P	55 - 139
2454159	DDD-p,p'	69.6	61.1	P/P	30 - 109
2454159	DDE-p,p'	77.7	70.0	P/P	35 - 106
2454159	DDT-p,p'	89.1	87.4	P/P	41 - 101
2454159	Delta-BHC	115	117	P/P	58 - 165
2454159	Deltamethrin	115	94.5	P/P	10 - 194
2454159	Dichlobenil	58.1	44.5	P/P	22 - 114
2454159	Dicofol	75.6	69.6	P/P	17 - 133
2454159	Dieldrin	88.1	78.7	P/P	45 - 129
2454159	Endosulfan I	86.1	92.2	P/P	49 - 104
2454159	Endosulfan II	90.5	83.5	P/P	37 - 117
2454159	Endosulfan Sulfate	87.4	62.2	P/P	38 - 128
2454159	Endrin	73.7	71.0	P/P	35 - 116
2454159	Endrin Aldehyde	80.1	66.8	P/P	19 - 108
2454159	Endrin Ketone	88.3	71.4	P/P	44 - 134
2454159	Esfenvalerate	126	111	P/P	27 - 176
2454159	Ethalfuralin	86.9	72.6	P/P	49 - 100
2454159	Fenpropathrin	81.8	68.9	P/P	34 - 117
2454159	Gamma-BHC	83.3	90.1	P/P	59 - 129
2454159	Gamma-Chlordane	71.6	52.0	P/P	33 - 107
2454159	Heptachlor	92.3	86.1	P/P	37 - 94.0
2454159	Heptachlor Epoxide	92.0	111	P/P	38 - 118
2454159	Hexachlorobenzene	54.5	43.1	P/P	35 - 97.0
2454159	Kepone	155	140	P/P	10 - 221
2454159	Lambda-Cyhalothrin	85.8	62.3	P/P	23 - 190
2454159	Methoprene	63.2	52.5	P/P	21 - 109
2454159	Methoxychlor	85.5	66.6	P/P	46 - 118
2454159	MGK-264	90.7	97.4	P/P	39 - 122
2454159	Mirex	58.8	45.9	P/P	25 - 90.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P438751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454159	Oxychlordane	86.5	81.5	P/P	42 - 100
2454159	Permethrin	89.9	87.6	P/P	33 - 181
2454159	Phenothrin	85.8	87.7	P/P	12 - 125
2454159	Piperonyl Butoxide	96.8	105	P/P	10 - 178
2454159	Prallethrin	72.3	64.5	P/P	24 - 122
2454159	Tau-Fluvalinate	117	107	P/P	13 - 151
2454159	Tetramethrin	111	94.3	P/P	16 - 172
2454159	Trans-Nonachlor	90.0	114	P/F	39 - 100
2454159	Triclosan Methyl	69.1	64.8	P/P	43 - 110
2454159	Trifluralin	78.1	62.3	P/P	45 - 94.0

Reference Method: EPA 8276

Batch ID: P438751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454003	Chlordane	91.7	95.3	P/P	43 - 123
2454003	Toxaphene	113	112	P/P	27 - 156

Reference Method: SM 4500-F- C-2011

Batch ID: P438552

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454084	Fluoride	103	99.8	P/P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P438765

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454955	Fluoride	103	103	P/P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P438533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453982	Organic Carbon	94.2	91.5	P/P	85 - 115

Reference Method: SM 5310 B-2011

Batch ID: P438690

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452512	Organic Carbon	90.4	89.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P438414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453972	Color (true)	0.429	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453980	Turbidity	11.7	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453793	Chloride	0.661	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453793	Sulfate	0.756	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454116	Chloride	0.861	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454116	Sulfate	0.0679	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453982	Ammonia-N	1.41	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438466

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453744	Kjeldahl Nitrogen	6.98	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438598

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453742	NO2NO3-N	0.980	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2455704	NO2NO3-N	0.517	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453742	Total-P	1.57	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454066	Total-P	1.84	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P438751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454003	PCB-1016	20.3	Spike	P	0 - 25
2454003	PCB-1260	2.87	Spike	P	0 - 30
2454159	Aldrin	23.8	Spike	P	0 - 41
2454159	Alpha-BHC	3.63	Spike	P	0 - 25
2454159	Alpha-Chlordane	12.4	Spike	P	0 - 32
2454159	Beta-BHC	9.57	Spike	P	0 - 33
2454159	Beta-Cyfluthrin	9.38	Spike	P	0 - 43
2454159	Bifenthrin	20.0	Spike	P	0 - 52
2454159	Chlorothalonil	3.45	Spike	P	0 - 82
2454159	Cis-Nonachlor	32.2	Spike	P	0 - 33
2454159	Cypermethrin	7.17	Spike	P	0 - 51
2454159	Dacthal	18.2	Spike	P	0 - 27
2454159	DDD-p,p'	13.1	Spike	P	0 - 39
2454159	DDE-p,p'	10.4	Spike	P	0 - 31
2454159	DDT-p,p'	1.88	Spike	P	0 - 29
2454159	Delta-BHC	1.58	Spike	P	0 - 35
2454159	Deltamethrin	19.2	Spike	P	0 - 100
2454159	Dichlobenil	26.5	Spike	P	0 - 40
2454159	Dicofol	8.30	Spike	P	0 - 37
2454159	Dieldrin	11.2	Spike	P	0 - 27
2454159	Endosulfan I	6.77	Spike	P	0 - 23
2454159	Endosulfan II	8.01	Spike	P	0 - 34
2454159	Endosulfan Sulfate	33.7	Spike	P	0 - 36

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P438751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454159	Endrin	3.63	Spike	P	0 - 45
2454159	Endrin Aldehyde	18.1	Spike	P	0 - 76
2454159	Endrin Ketone	21.2	Spike	P	0 - 43
2454159	Esfenvalerate	12.9	Spike	P	0 - 51
2454159	Ethalfuralin	18.0	Spike	P	0 - 22
2454159	Fenpropathrin	17.1	Spike	P	0 - 49
2454159	Gamma-BHC	7.93	Spike	P	0 - 28
2454159	Gamma-Chlordane	31.7	Spike	P	0 - 40
2454159	Heptachlor	6.91	Spike	P	0 - 29
2454159	Heptachlor Epoxide	19.0	Spike	P	0 - 33
2454159	Hexachlorobenzene	23.2	Spike	P	0 - 36
2454159	Kepone	9.70	Spike	P	0 - 85
2454159	Lambda-Cyhalothrin	31.7	Spike	P	0 - 55
2454159	Methoprene	18.5	Spike	P	0 - 53
2454159	Methoxychlor	24.8	Spike	P	0 - 50
2454159	MGK-264	7.15	Spike	P	0 - 43
2454159	Mirex	24.7	Spike	P	0 - 40
2454159	Oxychlordane	5.90	Spike	P	0 - 31
2454159	Permethrin	2.52	Spike	P	0 - 50
2454159	Phenothrin	2.21	Spike	P	0 - 58
2454159	Piperonyl Butoxide	7.28	Spike	P	0 - 100
2454159	Prallethrin	11.5	Spike	P	0 - 39
2454159	Tau-Fluvalinate	8.43	Spike	P	0 - 54
2454159	Tetramethrin	16.5	Spike	P	0 - 51
2454159	Trans-Nonachlor	23.4	Spike	P	0 - 39
2454159	Triclosan Methyl	6.48	Spike	P	0 - 31
2454159	Trifluralin	22.6	Spike	F	0 - 22

Reference Method: EPA 8276

Batch ID: P438751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454003	Chlordane	3.53	Spike	P	0 - 28
2454003	Toxaphene	0.493	Spike	P	0 - 27

Reference Method: SM 2320 B-2011

Batch ID: P438549

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454084	Total Alkalinity	0.552	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P438848

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454086	TDS	9.07	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P439144

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454728	TDS	2.53	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P438776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454067	TSS	9.30	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P438552

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454084	Fluoride	1.43	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P438765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454955	Fluoride	0.516	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P438533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453982	Organic Carbon	2.62	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P438690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452512	Organic Carbon	0.627	Spike	P	0 - 15

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2454003
Field Sample ID: G4NW0021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	75.0	P	37 - 129
EPA 8270E	Decachlorobiphenyl	67.0	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	54.5	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	72.4	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	69.9	P	28 - 102
EPA 8276	PCNB	98.3	P	49 - 115

Lab Sample ID: 2454004
Field Sample ID: G4NW0022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	78.8	P	37 - 129
EPA 8270E	Decachlorobiphenyl	63.3	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	54.9	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	52.4	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	73.7	P	28 - 102
EPA 8276	PCNB	110	P	49 - 115

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A122980

Included Lab Sample IDs: 2453980, 2453981

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122985

Included Lab Sample IDs: 2453980, 2453981

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.0	P/P	95 - 105

Reference Method: SM 5310 B-2011

Run ID: A123034

Included Lab Sample IDs: 2453982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	95.4	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A123047

Included Lab Sample IDs: 2453980, 2453981

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.3	98.1	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A123047

Included Lab Sample IDs: 2453980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123049

Included Lab Sample IDs: 2453982, 2453983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.6	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123055

Included Lab Sample IDs: 2453982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	97.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123057

Included Lab Sample IDs: 2453982, 2453983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	95.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123063

Included Lab Sample IDs: 2453982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123085

Included Lab Sample IDs: 2453983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A123093

Included Lab Sample IDs: 2453983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	108	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A123118

Included Lab Sample IDs: 2453980, 2453981

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	101	P/P	90 - 110
Chloride	103	104	P/P	90 - 110
Sulfate	101	99.5	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A123130

Included Lab Sample IDs: 2453981

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	104	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A123145

Included Lab Sample IDs: 2454003, 2454004

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	97.3		P	80 - 120
PCB-1260	105		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123188

Included Lab Sample IDs: 2453983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A123313

Included Lab Sample IDs: 2454003, 2454004

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	111		P	80 - 120
Alpha-BHC	91.0		P	80 - 120
Alpha-Chlordane	87.0		P	80 - 120
Beta-BHC	101		P	80 - 120
Beta-Cyfluthrin	101		P	80 - 120
Bifenthrin	102		P	80 - 120
Chlorothalonil	109		P	80 - 120
Cis-Nonachlor	96.7		P	80 - 120
Cypermethrin	102		P	80 - 120
Dacthal	112		P	80 - 120
DDD-p,p'	104		P	80 - 120
DDE-p,p'	88.1		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	98.3		P	80 - 120
Deltamethrin	100		P	80 - 120
Dichlobenil	108		P	80 - 120
Dicofol	98.7		P	80 - 120
Dieldrin	96.2		P	80 - 120
Endosulfan I	97.5		P	80 - 120
Endosulfan II	96.1		P	80 - 120
Endosulfan Sulfate	105		P	80 - 120
Endrin	105		P	80 - 120
Endrin Aldehyde	98.7		P	80 - 120
Endrin Ketone	101		P	80 - 120
Esfenvalerate	100		P	80 - 120
Ethalfuralin	107		P	80 - 120
Fenpropathrin	97.7		P	80 - 120
Gamma-BHC	98.4		P	80 - 120
Gamma-Chlordane	97.5		P	80 - 120
Heptachlor	118		P	80 - 120
Heptachlor Epoxide	106		P	80 - 120
Hexachlorobenzene	96.9		P	80 - 120
Kepone	87.5		P	80 - 120
Lambda-Cyhalothrin	100		P	80 - 120
Methoprene	90.1		P	80 - 120
Methoxychlor	103		P	80 - 120
MGK-264	85.1		P	80 - 120
Mirex	99.1		P	80 - 120
Oxychlordane	92.0		P	80 - 120
Permethrin	96.9		P	80 - 120
Phenothrin	101		P	80 - 120
Piperonyl Butoxide	97.1		P	80 - 120
Prallethrin	105		P	80 - 120
Tau-Fluvalinate	106		P	80 - 120
Tetramethrin	99.8		P	80 - 120
Trans-Nonachlor	100		P	80 - 120
Triclosan Methyl	100		P	80 - 120
Trifluralin	102		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8276

Run ID: A123319

Included Lab Sample IDs: 2454003, 2454004

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	102		P	80 - 120
Toxaphene	105		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	99.2				0.429	
EPA 180.1 Rev. 2.0	Turbidity	103				11.7	
EPA 300.0 Rev. 2.1	Chloride	101	102	105		0.661	
	Chloride	100	101	98.5		0.861	
	Sulfate	101	99.8	104		0.756	
	Sulfate	99.4	99.4	95.6		0.0679	
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	94.4	96.6			1.41
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.8	102	94.5			6.98
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	102	102			0.980
	NO2NO3-N	99.0	96.5	97.0			0.517
EPA 365.1 Rev. 2.0	Total-P	103	96.5	95.0			1.57
	Total-P	104	96.7	98.5			1.84
EPA 8270E	Aldrin	56.2	61.6	48.5			23.8
	Alpha-BHC	88.3	93.0	89.7			3.63
	Alpha-Chlordane	76.3	72.4	81.9			12.4
	Beta-BHC	109	96.3	106			9.57
	Beta-Cyfluthrin	51.8	103	94.1			9.38
	Bifenthrin	39.4	80.7	66.0			20.0
	Chlorothalonil	76.3	138	133			3.45
	Cis-Nonachlor	61.4	60.5	43.7			32.2
	Cypermethrin	68.8	133	143			7.17
	Dacthal	90.3	82.7	68.9			18.2
	DDD-p,p'	72.6	69.6	61.1			13.1
	DDE-p,p'	77.1	77.7	70.0			10.4
	DDT-p,p'	73.3	89.1	87.4			1.88
	Delta-BHC	108	115	117			1.58
	Deltamethrin	71.2	115	94.5			19.2
	Dichlobenil	81.5	58.1	44.5			26.5
	Dicofol	71.7	75.6	69.6			8.30
	Dieldrin	86.1	88.1	78.7			11.2
	Endosulfan I	90.9	86.1	92.2			6.77
	Endosulfan II	91.8	90.5	83.5			8.01
	Endosulfan Sulfate	81.1	87.4	62.2			33.7
	Endrin	74.7	73.7	71.0			3.63
	Endrin Aldehyde	91.8	80.1	66.8			18.1
	Endrin Ketone	86.8	88.3	71.4			21.2
	Esfenvalerate	62.2	126	111			12.9
	Ethalfuralin	69.4	86.9	72.6			18.0
	Fenpropathrin	61.9	68.9	81.8			17.1
	Gamma-BHC	90.3	90.1	83.3			7.93
	Gamma-Chlordane	75.7	52.0	71.6			31.7
	Heptachlor	86.1	86.1	92.3			6.91
	Heptachlor Epoxide	91.0	111	92.0			19.0
	Hexachlorobenzene	59.0	43.1	54.5			23.2
	Kepone	142	140	155			9.70
	Lambda-Cyhalothrin	45.1	62.3	85.8			31.7
	Methoprene	46.0	52.5	63.2			18.5
	Methoxychlor	78.9	66.6	85.5			24.8
	MGK-264	82.4	97.4	90.7			7.15
	Mirex	50.6	45.9	58.8			24.7
	Oxychlordane	81.6	81.5	86.5			5.90
	PCB-1016	77.6	67.0	82.2			20.3
	PCB-1260	98.8	104	107			2.87
	Permethrin	52.9	87.6	89.9			2.52

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	MS
			LCS	SMP		
EPA 8270E	Phenothrin	42.2	87.7	85.8		2.21
	Piperonyl Butoxide	91.2	105	96.8		7.28
	Prallethrin	70.9	64.5	72.3		11.5
	Tau-Fluvalinate	51.5	107	117		8.43
	Tetramethrin	87.2	94.3	111		16.5
	Trans-Nonachlor	85.5	114	90.0		23.4
	Triclosan Methyl	85.3	64.8	69.1		6.48
	Trifluralin	68.8	62.3	78.1		22.6
EPA 8276	Chlordane	82.4	91.7	95.3		3.53
	Toxaphene	94.3	113	112		0.493
SM 2320 B-2011	Total Alkalinity	98.7			0.552	
SM 2540 C-2015	TDS	96.4			9.07	
	TDS	103			2.53	
SM 2540 D-2015	TSS	97.6			9.30	
SM 4500-F- C-2011	Fluoride	102	103	99.8		1.43
	Fluoride	103	103	103		0.516
SM 5310 B-2011	Organic Carbon	98.1	94.2	91.5		2.62
	Organic Carbon	95.0	90.4	89.7		0.627

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2453980, 2453981
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2453980, 2453981
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2453980, 2453981
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2453980, 2453981
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2453982, 2453983
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2453982, 2453983
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2453982, 2453983
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2453982, 2453983
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2454003, 2454004
EPA 8270E	PCBs in water matrices by GC/MS/MS	2454003, 2454004
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2454003, 2454004
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2453980, 2453981
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2453980, 2453981
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2453980, 2453981
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2453980, 2453981
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2453982, 2453983

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	12/01/2023			12/01/2023 12:08	Blanca Fach	2453980
	12/01/2023			12/01/2023 12:09	Blanca Fach	2453981
EPA 180.1 Rev. 2.0	12/01/2023			12/01/2023 11:20	Anna M. Plaviak	2453980
	12/01/2023			12/01/2023 11:24	Anna M. Plaviak	2453981
EPA 300.0 Rev. 2.1	12/01/2023			12/08/2023 04:25	James L Waggeberby	2453980
	12/01/2023			12/08/2023 15:36	Anna M. Plaviak	2453981
EPA 350.1 Rev. 2.0	12/01/2023			12/06/2023 13:00	Ping Hua	2453982
	12/01/2023			12/06/2023 13:04	Ping Hua	2453983
EPA 351.2 Rev. 2.0	12/01/2023	12/05/2023 11:47	Simonne.V. Calhoun	12/06/2023 11:14	Samantha L Bates	2453982
	12/01/2023	12/05/2023 11:47	Simonne.V. Calhoun	12/06/2023 11:16	Samantha L Bates	2453983
EPA 353.2 Rev. 2.0	12/01/2023			12/06/2023 13:58	Fadila Guebre	2453982
	12/01/2023			12/12/2023 14:28	Fadila Guebre	2453983
EPA 365.1 Rev. 2.0	12/01/2023	12/05/2023 12:17	Adam P Silver	12/06/2023 13:25	James L Waggeberby	2453982
	12/01/2023	12/06/2023 13:01	Adam P Silver	12/07/2023 11:49	Chandler E Cox	2453983
EPA 8270E	12/01/2023	12/06/2023 08:30	Rasheda Ghaffari	12/11/2023 20:28	Lipi Saha	2454003
	12/01/2023	12/06/2023 08:30	Rasheda Ghaffari	12/11/2023 21:28	Lipi Saha	2454004
	12/01/2023	12/06/2023 08:30	Rasheda Ghaffari	12/15/2023 22:10	Julie Wi	2454003
	12/01/2023	12/06/2023 08:30	Rasheda Ghaffari	12/15/2023 22:43	Julie Wi	2454004
EPA 8276	12/01/2023	12/06/2023 08:30	Rasheda Ghaffari	12/19/2023 04:55	Arthur Maknenko	2454003
	12/01/2023	12/06/2023 08:30	Rasheda Ghaffari	12/19/2023 06:46	Arthur Maknenko	2454004
SM 2320 B-2011	12/01/2023			12/05/2023 23:16	Chandler E Cox	2453981
	12/01/2023			12/05/2023 23:30	Chandler E Cox	2453980
SM 2540 C-2015	12/01/2023			12/05/2023 16:11	Yijie Li	2453980
	12/01/2023			12/08/2023 16:18	Yijie Li	2453981
SM 2540 D-2015	12/01/2023			12/05/2023 16:11	Yijie Li	2453980, 2453981
SM 4500-F- C-2011	12/01/2023			12/06/2023 02:12	Chandler E Cox	2453980
	12/01/2023			12/08/2023 02:58	Adam P Silver	2453981
SM 5310 B-2011	12/01/2023			12/05/2023 23:11	Kenneth H Lee	2453982
	12/01/2023			12/08/2023 05:04	Kenneth H Lee	2453983